

97

90

100

100



Performance

Accessibility

Best Practices

SEO

PWA



## Performance

Values are estimated and may vary. The [performance score is calculated](#) directly from these metrics. [See calculator.](#)

▲ 0–49    ■ 50–89    ● 90–100

Harry Potter			
Species	Gender	House	Ancestry
human	male	Gryffindor	half-blood
Hermione Granger			
Species	Gender	House	Ancestry
human	female	Gryffindor	muggleborn
Ron Weasley			
Species	Gender	House	Ancestry
human	male	Gryffindor	pure-blood
Draco Malfoy			
Species	Gender	House	Ancestry
human	male	Slytherin	pure-blood
Minerva McGonagall			
Species	Gender	House	Ancestry
human	female	Gryffindor	half-blood

### METRICS

Expand view

● First Contentful Paint  
0.7 s

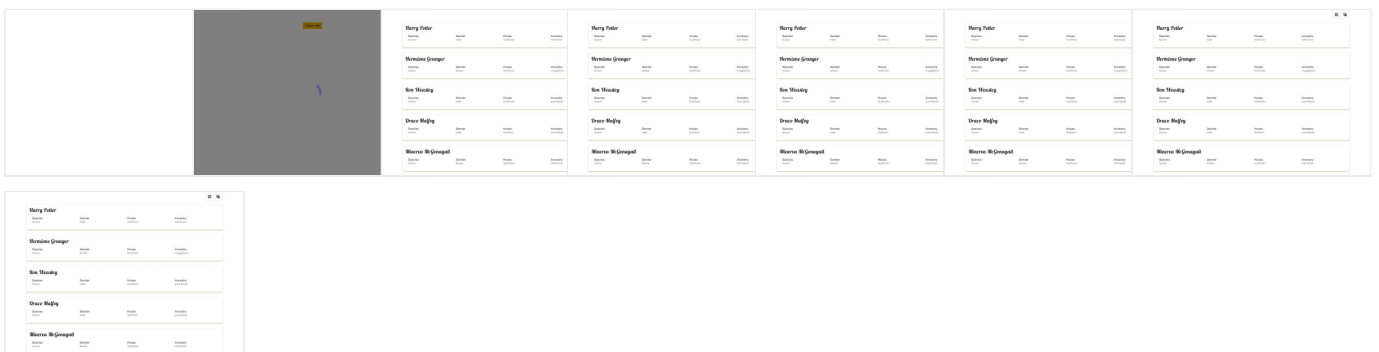
● Total Blocking Time  
110 ms

● Speed Index  
0.8 s

● Largest Contentful Paint  
1.0 s

● Cumulative Layout Shift  
0.033

View Treemap



Show audits relevant to: [All](#) [FCP](#) [LCP](#) [TBT](#) [CLS](#)

97

90

100

100



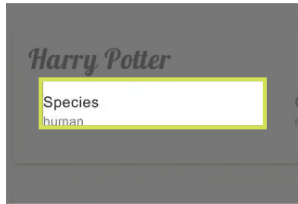
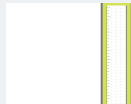
Leverage the `font-display` CSS feature to ensure text is user-visible while webfonts are loading.

[Learn more about font-display.](#) FCP LCP

URL	Potential Savings
-----	-------------------

▲ Avoid an excessive DOM size — 1,526 elements

A large DOM will increase memory usage, cause longer [style calculations](#), and produce costly [layout reflows](#). [Learn how to avoid an excessive DOM size.](#) TBT

Total DOM Elements			1,526
Maximum DOM Depth		Species <span _ngcontent-ng-c4169155003="" matlistitemtitle="" class="mat-mdc-list-item-title mdc-list-item__primary-text">	12
Maximum Child Elements		Harry Potter Species human Gender male House Gryffindor Ancestry half-blood Her... <div _ngcontent-ng-c4169155003="" class="card	51
Statistic	Element		Value

▲ Serve static assets with an efficient cache policy — 4 resources found

A long cache lifetime can speed up repeat visits to your page. [Learn more about efficient cache policies.](#)

GitHub	Utility	1st Party	163 KiB
/frontend_pec5/main.a47800ab7186a698.js	(raquelbayas.github.io)	10m	137 KiB
/frontend_pec5/styles.e99b3275d67c6a49.css	(raquelbayas.github.io)	10m	13 KiB



URL	Cache TTL	Transfer Size
-----	--------------	------------------

○ Avoid chaining critical requests — 5 chains found

The Critical Request Chains below show you what resources are loaded with a high priority. Consider reducing the length of chains, reducing the download size of resources, or deferring the download of unnecessary resources to improve page load. [Learn how to avoid chaining critical](#)

URL	Cache TTL	Transfer Size
-----	--------------	------------------

Maximum critical path latency: 47.072s ms

Initial Navigation



○ User Timing marks and measures — 36 user timings

Consider instrumenting your app with the User Timing API to measure your app's real-world performance during key user experiences. [Learn more about User Timing marks.](#)

Zone	Measure	302.14 ms	0.46 ms
Zone:ZoneAwarePromise	Measure	302.76 ms	0.64 ms
Zone:toString	Measure	303.45 ms	0.05 ms
Zone:util	Measure	303.71 ms	0.59 ms
Zone:legacy	Measure	304.33 ms	0.07 ms
Zone:queueMicrotask	Measure	304.38 ms	0.02 ms
Zone:timers	Measure	304.45 ms	0.25 ms
Zone:requestAnimationFrame	Measure	304.72 ms	0.08 ms
Zone:blocking	Measure	304.80 ms	0.10 ms
Zone:EventTarget	Measure	304.92 ms	0.88 ms

97

90

100

100



Zone:IntersectionObserver	Measure	306.88 ms	0.11 ms
Zone:FileReader	Measure	306.28 ms	1.12 ms
Zone:on_property	Measure	307.47 ms	20.83 ms
Zone:customElements	Measure	328.33 ms	0.37 ms
Zone:XHR	Measure	328.69 ms	0.21 ms
Zone:geolocation	Measure	328.99 ms	0.21 ms
Zone:PromiseRejectionEvent	Measure	329.17 ms	0.03 ms
Zone	Mark	302.19 ms	
Zone:ZoneAwarePromise	Mark	302.77 ms	
Zone:toString	Mark	303.46 ms	
Zone:util	Mark	303.72 ms	
Zone:legacy	Mark	304.34 ms	
Zone:queueMicrotask	Mark	304.38 ms	
Zone:timers	Mark	304.45 ms	
Zone:requestAnimationFrame	Mark	304.73 ms	
Zone:blocking	Mark	304.81 ms	
Zone:EventTarget	Mark	304.92 ms	
Zone:MutationObserver	Mark	305.85 ms	
Zone:IntersectionObserver	Mark	306.10 ms	
Zone:FileReader	Mark	306.28 ms	
Zone:on_property	Mark	307.47 ms	
Zone:customElements	Mark	328.34 ms	
Zone:XHR	Mark	328.71 ms	
Zone:geolocation	Mark	329.00 ms	
Name	Type	Start Time	Duration

To set budgets for the quantity and size of page resources, add a budget.json file. [Learn more](#)

97

90

100

100



Total	10.0	356.6 KiB	
Script	3.0	150.5 KiB	
Font	2.0	143.2 KiB	
Stylesheet	3.0	39.3 KiB	
Other	1.0	21.4 KiB	
Name	Type	Start Time	Duration
Image	0.0	0.0 KiB	
Media	0.0	0.0 KiB	
Resource Type	Requests	Transfer Size	

☐ Largest Contentful Paint element — 1 element found

This is the largest contentful element painted within the viewport. [Learn more about the Largest Contentful Paint element](#) LCP



Minerva McGonagall

```
<mat-card-title _ngcontent-ng-c4169155003="" class="mat-mdc-card-title">
```

Element

☐ Avoid large layout shifts — 1 element found

These DOM elements contribute most to the CLS of the page. [Learn how to improve CLS](#) CLS



Cargar más

```
<div _ngcontent-ng-c4169155003="" class="button-container">
```

0.033

Element

CLS Contribution

☐ Avoid long main-thread tasks — 2 long tasks found

Lists the longest tasks on the main thread, useful for identifying worst contributors to input delay.

97

90

100

100



GitHub	Utility	1st Party		236 ms
/frontend_pec5/polyfills.8289cd2560fa2732.js (raquelbayas.github.io)				1,048 ms 128 ms
URL				Start Time Duration

More information about the performance of your application. These numbers don't [directly affect](#) the Performance score.

PASSED AUDITS (29) Hide

● Eliminate render-blocking resources — Potential savings of 40 ms ^

Resources are blocking the first paint of your page. Consider delivering critical JS/CSS inline and deferring all non-critical JS/styles. [Learn how to eliminate render-blocking resources.](#) FCP LCP

URL	Transfer Size	Potential Savings
-----	---------------	-------------------

● Properly size images ^

Serve images that are appropriately-sized to save cellular data and improve load time. [Learn how to size images.](#)

● Defer offscreen images ^

Consider lazy-loading offscreen and hidden images after all critical resources have finished loading to lower time to interactive. [Learn how to defer offscreen images.](#)

● Minify CSS ^

Minifying CSS files can reduce network payload sizes. [Learn how to minify CSS.](#) FCP LCP

● Minify JavaScript ^

Minifying JavaScript files can reduce payload sizes and script parse time. [Learn how to minify.](#)

97

90

100

100



● Reduce unused CSS — Potential savings of 37 KiB

Reduce unused rules from stylesheets and defer CSS not used for above-the-fold content to decrease bytes consumed by network activity. [Learn how to reduce unused CSS.](#) FCP LCP

☒ Show 3rd-party resources (1)

JSDelivr CDN	Cdn	25.5 KiB	25.0 KiB
...css/bootstrap.min.css	(cdn.jsdelivr.net)	25.5 KiB	25.0 KiB
URL		Transfer Size	Potential Savings

● Reduce unused JavaScript — Potential savings of 58 KiB

Reduce unused JavaScript and defer loading scripts until they are required to decrease bytes consumed by network activity. [Learn how to reduce unused JavaScript.](#) LCP

URL		Transfer Size	Potential Savings
-----	--	---------------	-------------------

● Efficiently encode images

Optimized images load faster and consume less cellular data. [Learn how to efficiently encode images.](#)

● Serve images in next-gen formats

Image formats like WebP and AVIF often provide better compression than PNG or JPEG, which means faster downloads and less data consumption. [Learn more about modern image formats.](#)

● Enable text compression

Text-based resources should be served with compression (gzip, deflate or brotli) to minimize total

97

90

100

100



### ● Preconnect to required origins ^

Consider adding preconnect or dns-prefetch resource hints to establish early connections to important third-party origins. [Learn how to preconnect to required origins.](#) FCP LCP

### ● Initial server response time was short — Root document took 160 ms ^

Keep the server response time for the main document short because all other requests depend on it. [Learn more about the Time to First Byte metric.](#) FCP LCP

GitHub	Utility	1st Party	160 ms
URL			Time Spent

### ● Avoid multiple page redirects ^

Redirects introduce additional delays before the page can be loaded. [Learn how to avoid page redirects.](#) FCP LCP

### ○ Preload key requests ^

Consider using `<link rel=preload>` to prioritize fetching resources that are currently requested later in page load. [Learn how to preload key requests.](#) FCP LCP

### ● Use video formats for animated content ^

Large GIFs are inefficient for delivering animated content. Consider using MPEG4/WebM videos for animations and PNG/WebP for static images instead of GIF to save network bytes. [Learn more about efficient video formats](#) LCP

### ● Remove duplicate modules in JavaScript bundles ^

Remove large, duplicate JavaScript modules from bundles to reduce unnecessary bytes consumed by network activity. TBT



## ● Avoid serving legacy JavaScript to modern browsers



97

90

100

100



deployment strategy using module/nomodule feature detection to reduce the amount of code shipped to modern browsers, while retaining support for legacy browsers. [Learn how to use modern JavaScript](#) TBT

## ○ Preload Largest Contentful Paint image



If the LCP element is dynamically added to the page, you should preload the image in order to improve LCP. [Learn more about preloading LCP elements](#). LCP

## ● Avoids enormous network payloads — Total size was 357 KiB



Large network payloads cost users real money and are highly correlated with long load times. [Learn how to reduce payload sizes](#). LCP

☒ Show 3rd-party resources (5)

GitHub	Utility	1st Party	165.3 KiB
/frontend_pec5/main.a47800ab7186a698.js (raquelbayas.github.io)			136.8 KiB
/frontend_pec5/styles.e99b3275d67c6a49.css (raquelbayas.github.io)			12.6 KiB
/frontend_pec5/polyfills.8289cd2560fa2732.js (raquelbayas.github.io)			12.5 KiB
/frontend_pec5/ (raquelbayas.github.io)			2.2 KiB
/frontend_pec5/runtime.2f59f58aee057fde.js (raquelbayas.github.io)			1.3 KiB
Google Fonts	Cdn		144.4 KiB
...v140/flUhRq6tz....woff2 (fonts.gstatic.com)			126.4 KiB
...v28/nellZCirq....woff2 (fonts.gstatic.com)			16.8 KiB
/css2?family=Lobster&display=swap (fonts.googleapis.com)			1.2 KiB
JSDelivr CDN	Cdn		25.5 KiB
...css/bootstrap.min.css (cdn.jsdelivr.net)			25.5 KiB
onrender.com			21.4 KiB

URL

Transfer  
Size

### JavaScript execution time — 0.3 s

Consider reducing the time spent parsing, compiling, and executing JS. You may find delivering smaller JS payloads helps with this. [Learn how to reduce Javascript execution time.](#) TBT

GitHub	Utility	1st Party	334 ms	245 ms	3 ms
/frontend_pec5/polyfills.8289cd2560fa2732.js (raquelbayas.github.io)			138 ms	134 ms	0 ms
/frontend_pec5/main.a47800ab7186a698.js (raquelbayas.github.io)			109 ms	106 ms	2 ms
/frontend_pec5/ (raquelbayas.github.io)			87 ms	6 ms	1 ms
URL			Total CPU Time	Script Evaluation	Script Parse

### Minimizes main-thread work — 0.4 s

URL

Transfer  
Size

Script Evaluation	278 ms
Other	54 ms
Style & Layout	48 ms
Garbage Collection	26 ms
Rendering	15 ms
Parse HTML & CSS	6 ms
Category	Time Spent

### Minimize third-party usage — Third-party code blocked the main thread for 0 ms

Third-party code can significantly impact load performance. Limit the number of redundant third-

97

90

100

100



Google Fonts	Cdn	144 KiB	0 ms
...v140/flUhRq6tz....woff2	(fonts.gstatic.com)	126 KiB	0 ms
...v28/nelLzCirq....woff2	(fonts.gstatic.com)	17 KiB	0 ms
JSDelivr CDN	Cdn	26 KiB	0 ms
...css/bootstrap.min.css	(cdn.jsdelivr.net)	26 KiB	0 ms
onrender.com		21 KiB	0 ms
Third-Party		Transfer Size	Main-Thread Blocking Time

☐ Lazy load third-party resources with facades

Some third-party embeds can be lazy loaded. Consider replacing them with a facade until they are required. [Learn how to defer third-parties with a facade.](#) TBT

☐ Largest Contentful Paint image was not lazily loaded

Above-the-fold images that are lazily loaded render later in the page lifecycle, which can delay the largest contentful paint. [Learn more about optimal lazy loading.](#) LCP

☒ Uses passive listeners to improve scrolling performance

Consider marking your touch and wheel event listeners as passive to improve your page's scroll performance. [Learn more about adopting passive event listeners.](#)

☒ Avoids `document.write()`

For users on slow connections, external scripts dynamically injected via `document.write()` can delay page load by tens of seconds. [Learn how to avoid document.write\(\).](#)

☐ Avoid non-composited animations

Animations which are not composited can be janky and increase CLS. [Learn how to avoid non-composited animations](#) CLS

- Image elements have explicit `width` and `height`



97

90

100

100



- Has a `<meta name="viewport">` tag with `width` or `initial-scale`



A `<meta name="viewport">` not only optimizes your app for mobile screen sizes, but also prevents [a 300 millisecond delay to user input](#). [Learn more about using the viewport meta tag](#).

TBT

90

## Accessibility

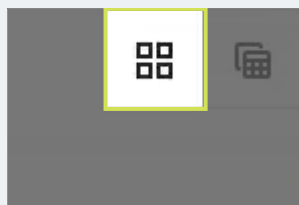
These checks highlight opportunities to [improve the accessibility of your web app](#). Only a subset of accessibility issues can be automatically detected so manual testing is also encouraged.

### NAMES AND LABELS

- ▲ Buttons do not have an accessible name



When a button doesn't have an accessible name, screen readers announce it as "button", making it unusable for users who rely on screen readers. [Learn how to make buttons more accessible](#).



grid\_view

```
<button type="button" class="mat-button-toggle-button mat-focus-indicator" id="mat-button-toggle-1-button" tabindex="0" aria-pressed="false" name="mat-button-toggle-group-0">
```



table\_view

```
<button type="button" class="mat-button-toggle-button mat-focus-indicator" id="mat-button-toggle-2-button" tabindex="0" aria-
```



## Failing Elements

These are opportunities to improve the semantics of the controls in your application. This may enhance the experience for users of assistive technology, like a screen reader.

### ADDITIONAL ITEMS TO MANUALLY CHECK (10)

Hide

#### ☐ The page has a logical tab order



Tabbing through the page follows the visual layout. Users cannot focus elements that are offscreen. [Learn more about logical tab ordering](#)

## Failing Elements

#### ☐ Interactive controls are keyboard focusable



Custom interactive controls are keyboard focusable and display a focus indicator. [Learn how to make custom controls focusable](#).

#### ☐ Interactive elements indicate their purpose and state



Interactive elements, such as links and buttons, should indicate their state and be distinguishable from non-interactive elements. [Learn how to decorate interactive elements with affordance hints](#).

#### ☐ The user's focus is directed to new content added to the page



If new content, such as a dialog, is added to the page, the user's focus is directed to it. [Learn how to direct focus to new content](#).

#### ☐ User focus is not accidentally trapped in a region



A user can tab into and out of any control or region without accidentally trapping their focus. [Learn how to avoid focus traps](#).

#### ☐ Custom controls have associated labels



Custom interactive controls have associated labels, provided by aria-label or aria-labelledby. [Learn more about custom controls and labels](#).

#### ☐ Custom controls have ARIA roles



Custom interactive controls have appropriate ARIA roles. [Learn how to add roles to custom controls](#).

#### ☐ Visual order on the page follows DOM order



DOM order matches the visual order, improving navigation for assistive technology. [Learn more](#)

97

90

100

100



#### ☐ Offscreen content is hidden from assistive technology

Offscreen content is hidden with `display: none` or `aria-hidden=true`. [Learn how to properly hide offscreen content.](#)

#### ☐ HTML5 landmark elements are used to improve navigation

Landmark elements (`<main>`, `<nav>`, etc.) are used to improve the keyboard navigation of the page for assistive technology. [Learn more about landmark elements.](#)

These items address areas which an automated testing tool cannot cover. Learn more in our guide on [conducting an accessibility review](#).

### PASSED AUDITS (14)

Hide

#### ☒ `[aria-*)` attributes match their roles

Each ARIA role supports a specific subset of `aria-*)` attributes. Mismatching these invalidates the `aria-*)` attributes. [Learn how to match ARIA attributes to their roles.](#)

#### ☒ `[aria-hidden="true"]` is not present on the document `<body>`

Assistive technologies, like screen readers, work inconsistently when `aria-hidden="true"` is set on the document `<body>`. [Learn how `aria-hidden` affects the document body.](#)

#### ☒ `[role]`s have all required `[aria-*)` attributes

Some ARIA roles have required attributes that describe the state of the element to screen readers. [Learn more about roles and required attributes.](#)

#### ☒ `[role]` values are valid

ARIA roles must have valid values in order to perform their intended accessibility functions. [Learn more about valid ARIA roles.](#)

#### ☒ `[aria-*)` attributes have valid values

Assistive technologies, like screen readers, can't interpret ARIA attributes with invalid values.

97

90

100

100



● [aria-\*] attributes are valid and not misspelled ^

Assistive technologies, like screen readers, can't interpret ARIA attributes with invalid names.

[Learn more about valid ARIA attributes.](#)

● [user-scalable="no"] is not used in the <meta name="viewport"> element and the [maximum-scale] attribute is not less than 5. ^

Disabling zooming is problematic for users with low vision who rely on screen magnification to properly see the contents of a web page. [Learn more about the viewport meta tag.](#)

● [aria-hidden="true"] elements do not contain focusable descendents ^

Focusable descendents within an [aria-hidden="true"] element prevent those interactive elements from being available to users of assistive technologies like screen readers. [Learn how aria-hidden affects focusable elements.](#)

● Background and foreground colors have a sufficient contrast ratio ^

Low-contrast text is difficult or impossible for many users to read. [Learn how to provide sufficient color contrast.](#)

● Document has a <title> element ^

The title gives screen reader users an overview of the page, and search engine users rely on it heavily to determine if a page is relevant to their search. [Learn more about document titles.](#)

● [id] attributes on active, focusable elements are unique ^

All focusable elements must have a unique id to ensure that they're visible to assistive technologies. [Learn how to fix duplicate ids.](#)

● <html> element has a [lang] attribute ^

If a page doesn't specify a lang attribute, a screen reader assumes that the page is in the default

97

90

100

100



[about the lang attribute.](#)

- `<html>` element has a valid value for its `[lang]` attribute ^

Specifying a valid [BCP 47 language](#) helps screen readers announce text properly. [Learn how to use the lang attribute.](#)

- No element has a `[tabindex]` value greater than 0 ^

A value greater than 0 implies an explicit navigation ordering. Although technically valid, this often creates frustrating experiences for users who rely on assistive technologies. [Learn more about the tabindex attribute.](#)

NOT APPLICABLE (29)

Hide

- `[accesskey]` values are unique ^

Access keys let users quickly focus a part of the page. For proper navigation, each access key must be unique. [Learn more about access keys.](#)

- `button`, `link`, and `menuitem` elements have accessible names ^

When an element doesn't have an accessible name, screen readers announce it with a generic name, making it unusable for users who rely on screen readers. [Learn how to make command elements more accessible.](#)

- ARIA input fields have accessible names ^

When an input field doesn't have an accessible name, screen readers announce it with a generic name, making it unusable for users who rely on screen readers. [Learn more about input field labels.](#)

- ARIA `meter` elements have accessible names ^

When a meter element doesn't have an accessible name, screen readers announce it with a generic name, making it unusable for users who rely on screen readers. [Learn how to name meter](#)



[elements](#).

97

90

100

100



When a progressbar element doesn't have an accessible name, screen readers announce it with a generic name, making it unusable for users who rely on screen readers. [Learn how to label progressbar elements](#).

- ☐ Elements with an ARIA `[role]` that require children to contain a specific `[role]` have all required children. ^

Some ARIA parent roles must contain specific child roles to perform their intended accessibility functions. [Learn more about roles and required children elements](#).

- ☐ `[role]`s are contained by their required parent element ^

Some ARIA child roles must be contained by specific parent roles to properly perform their intended accessibility functions. [Learn more about ARIA roles and required parent element](#).

- ☐ ARIA toggle fields have accessible names ^

When a toggle field doesn't have an accessible name, screen readers announce it with a generic name, making it unusable for users who rely on screen readers. [Learn more about toggle fields](#).

- ☐ ARIA `tooltip` elements have accessible names ^

When a tooltip element doesn't have an accessible name, screen readers announce it with a generic name, making it unusable for users who rely on screen readers. [Learn how to name tooltip elements](#).

- ☐ ARIA `treeitem` elements have accessible names ^

When a `treeitem` element doesn't have an accessible name, screen readers announce it with a generic name, making it unusable for users who rely on screen readers. [Learn more about labeling treeitem elements](#).

- ☐ The page contains a heading, skip link, or landmark region ^

Adding ways to bypass repetitive content lets keyboard users navigate the page more efficiently. [Learn more about bypass blocks](#).

- ☐ `<dl>`'s contain only properly-ordered `<dt>` and `<dd>` groups, `<script>`, `<template>` or `<div>` elements. ^

When definition lists are not properly marked up, screen readers may produce confusing or

97

90

100

100



#### ☐ Definition list items are wrapped in `<dl>` elements

Definition list items (`<dt>` and `<dd>`) must be wrapped in a parent `<dl>` element to ensure that screen readers can properly announce them. [Learn how to structure definition lists correctly.](#)

#### ☐ ARIA IDs are unique

The value of an ARIA ID must be unique to prevent other instances from being overlooked by assistive technologies. [Learn how to fix duplicate ARIA IDs.](#)

#### ☐ No form fields have multiple labels

Form fields with multiple labels can be confusingly announced by assistive technologies like screen readers which use either the first, the last, or all of the labels. [Learn how to use form labels.](#)

#### ☐ `<frame>` or `<iframe>` elements have a title

Screen reader users rely on frame titles to describe the contents of frames. [Learn more about frame titles.](#)

#### ☐ Heading elements appear in a sequentially-descending order

Properly ordered headings that do not skip levels convey the semantic structure of the page, making it easier to navigate and understand when using assistive technologies. [Learn more about heading order.](#)

#### ☐ Image elements have `[alt]` attributes

Informative elements should aim for short, descriptive alternate text. Decorative elements can be ignored with an empty alt attribute. [Learn more about the alt attribute.](#)

#### ☐ `<input type="image">` elements have `[alt]` text

When an image is being used as an `<input>` button, providing alternative text can help screen reader users understand the purpose of the button. [Learn about input image alt text.](#)

#### ☐ Form elements have associated labels

Labels ensure that form controls are announced properly by assistive technologies, like screen readers. [Learn more about form element labels.](#)

- ☐ Links have a discernible name



97

90

100

100



[accessible](#).

- ☐ Lists contain only `<li>` elements and script supporting elements (`<script>` and `<template>`).



Screen readers have a specific way of announcing lists. Ensuring proper list structure aids screen reader output. [Learn more about proper list structure](#).

- ☐ List items (`<li>`) are contained within `<ul>`, `<ol>` or `<menu>` parent elements



Screen readers require list items (`<li>`) to be contained within a parent `<ul>`, `<ol>` or `<menu>` to be announced properly. [Learn more about proper list structure](#).

- ☐ The document does not use `<meta http-equiv="refresh">`



Users do not expect a page to refresh automatically, and doing so will move focus back to the top of the page. This may create a frustrating or confusing experience. [Learn more about the refresh meta tag](#).

- ☐ `<object>` elements have alternate text



Screen readers cannot translate non-text content. Adding alternate text to `<object>` elements helps screen readers convey meaning to users. [Learn more about alt text for object elements](#).

- ☐ Cells in a `<table>` element that use the `[headers]` attribute refer to table cells within the same table.



Screen readers have features to make navigating tables easier. Ensuring `<td>` cells using the `[headers]` attribute only refer to other cells in the same table may improve the experience for screen reader users. [Learn more about the headers attribute](#).

- ☐ `<th>` elements and elements with `[role="columnheader"/"rowheader"]` have data cells they describe.



Screen readers have features to make navigating tables easier. Ensuring table headers always refer to some set of cells may improve the experience for screen reader users. [Learn more about table headers](#).

- ☐ `[lang]` attributes have a valid value



Specifying a valid [BCP 47 language](#) on elements helps ensure that text is pronounced correctly by

97

90

100

100



☐ `<video>` elements contain a `<track>` element with `[kind="captions"]`

When a video provides a caption it is easier for deaf and hearing impaired users to access its information. [Learn more about video captions.](#)

100

## Best Practices

### TRUST AND SAFETY

☐ Ensure CSP is effective against XSS attacks

A strong Content Security Policy (CSP) significantly reduces the risk of cross-site scripting (XSS) attacks. [Learn how to use a CSP to prevent XSS](#)

Description	Directive	Severity

### GENERAL

☐ Detected JavaScript libraries

All front-end JavaScript libraries detected on the page. [Learn more about this JavaScript library detection diagnostic audit.](#)

Name

Version

### ▲ Missing source maps for large first-party JavaScript

Source maps translate minified code to the original source code. This helps developers debug in production. In addition, Lighthouse is able to provide further insights. Consider deploying source maps to take advantage of these benefits. [Learn more about source maps.](#)

GitHub

Utility

1st Party

/frontend\_pec5/main.a47800ab7186a698.js (raquelbayas.github  
b.io)

URL

Map URL

PASSED AUDITS (12)

Hide

### ● Uses HTTPS

All sites should be protected with HTTPS, even ones that don't handle sensitive data. This includes avoiding [mixed content](#), where some resources are loaded over HTTP despite the initial request being served over HTTPS. HTTPS prevents intruders from tampering with or passively listening in on the communications between your app and your users, and is a prerequisite for HTTP/2 and many new web platform APIs. [Learn more about HTTPS.](#)

### ● Avoids requesting the geolocation permission on page load

Users are mistrustful of or confused by sites that request their location without context. Consider tying the request to a user action instead. [Learn more about the geolocation permission.](#)

### ● Avoids requesting the notification permission on page load

Users are mistrustful of or confused by sites that request to send notifications without context. Consider tying the request to user gestures instead. [Learn more about responsibly getting permission for notifications.](#)

### ● Allows users to paste into input fields

Preventing input pasting is a bad practice for the UX, and weakens security by blocking password

97

90

100

100



● Displays images with correct aspect ratio ^

Image display dimensions should match natural aspect ratio. [Learn more about image aspect ratio.](#)

● Serves images with appropriate resolution ^

Image natural dimensions should be proportional to the display size and the pixel ratio to maximize image clarity. [Learn how to provide responsive images.](#)

● Page has the HTML doctype ^

Specifying a doctype prevents the browser from switching to quirks-mode. [Learn more about the doctype declaration.](#)

● Properly defines charset ^

A character encoding declaration is required. It can be done with a `<meta>` tag in the first 1024 bytes of the HTML or in the Content-Type HTTP response header. [Learn more about declaring the character encoding.](#)

● Avoids `unload` event listeners ^

The `unload` event does not fire reliably and listening for it can prevent browser optimizations like the Back-Forward Cache. Use `pagehide` or `visibilitychange` events instead. [Learn more about unload event listeners](#)

● Avoids deprecated APIs ^

Deprecated APIs will eventually be removed from the browser. [Learn more about deprecated APIs.](#)

● No browser errors logged to the console ^

Errors logged to the console indicate unresolved problems. They can come from network request failures and other browser concerns. [Learn more about this errors in console diagnostic audit](#)

● No issues in the [Issues](#) panel in Chrome Devtools



97

90

100

100



Open up the Issues panel in Chrome DevTools for more details on each issue.

NOT APPLICABLE (1)

Hide

○ Fonts with `font-display: optional` are preloaded



Preload optional fonts so first-time visitors may use them. [Learn more about preloading fonts](#)

100

## SEO

These checks ensure that your page is following basic search engine optimization advice. There are many additional factors Lighthouse does not score here that may affect your search ranking, including performance on [Core Web Vitals](#). [Learn more about Google Search Essentials](#).

ADDITIONAL ITEMS TO MANUALLY CHECK (1)

Hide

○ Structured data is valid



Run the [Structured Data Testing Tool](#) and the [Structured Data Linter](#) to validate structured data. [Learn more about Structured Data](#).

Run these additional validators on your site to check additional SEO best practices.

PASSED AUDITS (9)

Hide

- Has a `<meta name="viewport">` tag with `width` or `initial-scale` ^

97

90

100

100



TBT

- Document has a `<title>` element ^

The title gives screen reader users an overview of the page, and search engine users rely on it heavily to determine if a page is relevant to their search. [Learn more about document titles.](#)

- Document has a meta description ^

Meta descriptions may be included in search results to concisely summarize page content. [Learn more about the meta description.](#)

- Page has successful HTTP status code ^

Pages with unsuccessful HTTP status codes may not be indexed properly. [Learn more about HTTP status codes.](#)

- Links have descriptive text ^

Descriptive link text helps search engines understand your content. [Learn how to make links more accessible.](#)

- Links are crawlable ^

Search engines may use href attributes on links to crawl websites. Ensure that the href attribute of anchor elements links to an appropriate destination, so more pages of the site can be discovered. [Learn how to make links crawlable](#)

- Page isn't blocked from indexing ^

Search engines are unable to include your pages in search results if they don't have permission to crawl them. [Learn more about crawler directives.](#)

- Document has a valid `hreflang` ^



hreflang links tell search engines what version of a page they should list in search results for a

97

90

100

100



## Document avoids plugins

Search engines can't index plugin content, and many devices restrict plugins or don't support them. [Learn more about avoiding plugins.](#)

NOT APPLICABLE (5)

Hide

## robots.txt is valid

If your robots.txt file is malformed, crawlers may not be able to understand how you want your website to be crawled or indexed. [Learn more about robots.txt.](#)

## Image elements have [alt] attributes

Informative elements should aim for short, descriptive alternate text. Decorative elements can be ignored with an empty alt attribute. [Learn more about the alt attribute.](#)

## Document has a valid rel=canonical

Canonical links suggest which URL to show in search results. [Learn more about canonical links.](#)

## Document uses legible font sizes

Font sizes less than 12px are too small to be legible and require mobile visitors to “pinch to zoom” in order to read. Strive to have >60% of page text ≥12px. [Learn more about legible font sizes.](#)

## Tap targets are sized appropriately

Interactive elements like buttons and links should be large enough (48x48px), or have enough space around them, to be easy enough to tap without overlapping onto other elements. [Learn more about tap targets.](#)



## PWA

These checks validate the aspects of a Progressive Web App. [Learn what makes a good Progressive Web App.](#)

### INSTALLABLE

#### Web app manifest and service worker meet the installability requirements

Service worker is the technology that enables your app to use many Progressive Web App features, such as offline, add to homescreen, and push notifications. With proper service worker and manifest implementations, browsers can proactively prompt users to add your app to their homescreen, which can lead to higher engagement. [Learn more about manifest installability requirements.](#)

### PWA OPTIMIZED

#### Registers a service worker that controls page and `start_url`

The service worker is the technology that enables your app to use many Progressive Web App features, such as offline, add to homescreen, and push notifications. [Learn more about Service Workers.](#)

#### Configured for a custom splash screen

A themed splash screen ensures a high-quality experience when users launch your app from their homescreens. [Learn more about splash screens.](#)

#### Sets a theme color for the address bar.

The browser address bar can be themed to match your site. [Learn more about theming the address bar.](#)

#### Content is sized correctly for the viewport

If the width of your app's content doesn't match the width of the viewport, your app might not be optimized for mobile screens. [Learn how to size content for the viewport.](#)

Has a `<meta name="viewport">` tag with width or initial-scale

97

90

100

100



prevents a 300 millisecond delay to user input. [Learn more about using the viewport meta tag.](#)

TBT

Manifest has a maskable icon

A maskable icon ensures that the image fills the entire shape without being letterboxed when installing the app on a device. [Learn about maskable manifest icons.](#)

#### ADDITIONAL ITEMS TO MANUALLY CHECK (3)

Hide

Site works cross-browser

To reach the most number of users, sites should work across every major browser. [Learn about cross-browser compatibility.](#)

Page transitions don't feel like they block on the network

Transitions should feel snappy as you tap around, even on a slow network. This experience is key to a user's perception of performance. [Learn more about page transitions.](#)

Each page has a URL

Ensure individual pages are deep linkable via URL and that URLs are unique for the purpose of shareability on social media. [Learn more about providing deep links.](#)

These checks are required by the baseline [PWA Checklist](#) but are not automatically checked by Lighthouse. They do not affect your score but it's important that you verify them manually.

Captured at Jun 12, 2023, 4:47

PM GMT+2

Initial page load

Emulated Desktop with Lighthouse

10.2.0

Unknown

Single page load

Using HeadlessChromium

112.0.5615.142 with Ir